

### **REMARKS**

Claims 1, 9, 15-20, 23, 26, 29-36, 38, 40 and 42 are pending in the present application. Claims 1, 9, 15-20, 23, 26, 29-36, 38, 40 and 42 stand rejected under 35 U.S.C. §112, first paragraph, as allegedly lacking an adequate written description. Applicants note with appreciation the withdrawal of the other previously pending rejections.

Applicants respectfully disagree with the Examiner. The claims are supported by an adequate written description. The Examiner attention is respectfully directed to the Declaration of Dr. Harold Trick (the "Trick Decl."), which rebuts the arguments made by the Examiner in support of the rejection.

The Examiner first argues that neither the specification of the patent application or the prior art identifies the major sperm protein, RNA polymerase II gene, and chitin synthase gene as embryonic lethal phenotype genes. The Trick Decl. establishes that this is not true with respect to RNA polymerase II and chitin synthase. Chitin synthase is identified in the specification as embryonic lethal on page 56, lines 5-7. Literature references also identify chitin synthase as embryonic lethal. See, for example, Johnston et al., *BMC Biology* 4:35 (2006)(attached at Tab 1). RNA polymerase is a well known embryonic lethal phenotype. See, for example, Table 1 in Zipperlin et al., *EMBO J.*, 20(15):3984-92 (2001)(attached at Tab 2).

The Examiner next argues that "transgenic plants expressing dsRNA from SEQ ID NO:1 for use in RNAi to produce nematode resistant transgenic plants are not rejected." It is not understood what the Examiner means by this statement. However, the data in the specification, for example, Figures 14-15, shows that the plants expressing the RNAi constructs have significantly less soybean cyst nematode egg production.

The Examiner next argues that "neither the instant specification nor the prior art describes a structural element specific to all *H. glycines* embryonic lethal phenotype genes that define a function essential for embryonic survival of the nematode, which would allow one to predictably determine the members of the genus of the nucleic acids as encompassed in the instant claims." The Trick Decl. establishes that this statement is not scientifically correct. The specification provides multiple examples of embryonic lethal phenotype genes and sequences. The structure of these genes is known and described to one of ordinary skill in the art. The genes each have different, known structures and have been shown to have an embryonic lethal

phenotype when disrupted. That is all the structural information a person of skill in the art needs to practice the invention.

The Examiner further states that the genes are “not a representative sample, given that the genus is large and encompasses genes yet to be identified for lethality.” The Trick Decl. establishes that while it is true that other genes might be identified, the specification provides a large number of specific examples of actual sequences and genes that can be used in the invention as claimed. Based on the identification of the genes in the specification, a person or ordinary skill in the art could readily identify other embryonic lethal genes of use in the invention and would recognize that a representative number of genes has been provided.

The Examiner then attempts to distinguish the holding of *Capon v. Eshhar*, 418 F.3d 1349 (Fed. Cir. 2005). The Examiner states that in *Capon*, the specification provided specific examples of genes within the scope of the claims and how to identify and isolate other genes useful in the claimed invention. This is a correct characterization of *Capon*, and, as established by the Trick Decl., this is precisely what the present specification does. Multiple examples of specific gene sequences are provided, as well as other genes that could be isolated and used. As stated by Dr. Trick: “One skilled in the art, upon reading the present specification, would have sufficient knowledge to generate, for example, embryonic lethal phenotype gene RNAi constructs that can be used as taught in the specification.” The Examiner argues that the specification only exemplifies one gene, the major sperm protein. This is not true, specific examples are provided for RNA polymerase II and chitin synthase and multiple other embryonic lethal phenotype genes are identified. The structure and properties of these genes is known.

As such, one of skill in the art would conclude that the Inventors were in possession of the necessary common attributes possessed by the members of the genus, and therefore the instant specification meets the written description requirement for these claims. The Applicants respectfully request that this rejection be withdrawn.

**CONCLUSION**

Each rejection of the Office Action mailed April 17, 2007 has been addressed. Should the Examiner believe that a telephone interview would aid in the prosecution of this application Applicants encourage the Examiner to call the undersigned collect at (608) 218-6900.

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